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PATENT
Docket No. 290.00330101IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Nancy W.Y. Ho et al.) Group Art Unit: 1653
Serial No.: 09/180,340)
Confirmation No.: 6674) Examiner: Hope A. ROBINSON
Filed: 20 August 1999)
For: STABLE RECOMBINANT YEASTS FOR FERMENTING XYLOSE TO ETHANOL

REPLY BRIEF

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
Attn: Examiner Robinson
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief is being filed under 35 C.F.R. §41.41 in response to the Examiner's Answer mailed 15 September 2005, and is presented in support of the Appeal filed 1 July 2004, from the final rejection of claims 14-18, 28-30, and 32-34 of the above-identified application.

Appellants respectfully maintain each of the arguments present in the Appellant's Brief on Appeal. Consideration of the following remarks is respectfully requested.

Grouping of Claims

The Examiner alleged that Appellants have not provided reasons as to why the claims at issue in Issue A do not stand or fall together. Appellants respectfully disagree with this allegation.

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Pursuant to 37 C.F.R. §1.192(c)(7), the Argument section of Appellants' Brief on Appeal included an explanation of why the claims of the group are believed to be separately patentable.

At page 8, line 12 through page 9, line 12, Appellants' Brief on Appeal provides reasons why claims 28 and 34 are separately patentable. At page 9, line 14 through page 11, line 14, Appellants' Brief on Appeal provides reasons why claims 17 and 29 are separately patentable.

Arguments**Reply to Examiner's Response to Arguments for both Issue A and Issue B**

Appellants note that the Examiner's Answer includes nearly identical comments in the answer to both Issue A and Issue B. Specifically, the Examiner asserts that in "the Ho et al. reference, it is disclosed that specific DNA fragments . . . enable[] the plasmid to be replicated autonomously." Examiner's Answer at sentence bridging pages 5 and 6, and at page 9, lines 12-14. The Examiner appears to have confused the phrase "replicated autonomously" with the phrase "autonomous replicating sequence." As discussed in the Appellant's Brief on Appeal, the replicons taught in the Ho et al. reference permit a plasmid to replicate, but not integrate. Appellant's Brief on Appeal, page 6, first full paragraph, and the paragraph bridging pages 12-13.

Appellants also note the Examiner asserts that "the [Ho et al.] reference teaches plasmids which are disclosed in the instant specification as replicative and integrative." Examiner's Answer at page 6, lines 4-6, and page 9, lines 16-18. This statement is false. For support, the Examiner refers to page 18, lines 31-32 of the instant specification, and discusses the plasmid pLNH-ST. The plasmid pLNH-ST is not disclosed in the Ho et al. reference. Thus, referral to pLNH-ST does not support the Examiner's assertion. The Examiner also refers to page 14, lines 1-3 of the instant specification, and discusses the plasmid pLNH 33. The plasmid pLNH 33 is disclosed in the Ho et al. reference, but pLNH 33 is a replicative plasmid, not a replicative and integrative plasmid. Thus, referral to pLNH 33 does not support the Examiner's assertion.

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The Examiner asserts that "Ho et al. disclose recombinant yeasts . . . thus the appellant's statement that the combination of the references might result in reduced mitotic stability is not persuasive." Examiner's Answer at page 7, lines 12-15, emphasis in original. The argument regarding reduced mitotic stability is made in the Appellant's Brief on Appeal at page 10, the first full paragraph. First, Appellants respectfully submit that the argument regarding reduced mitotic stability is directed to claims 17 and 29, not claims 14-16, 18, 28, 30 and 34 (see second full paragraph at page 9 of the Appellant's Brief). Second, Appellants respectfully note that the two documents cited in this rejection under 35 U.S.C. §103 both teach the use of yeast cells. Yeast cells are eukaryotic cells, and mitosis is the division of a eukaryotic cell, which requires the faithful segregation of chromosomes into the two daughter cells. The teaching by Lopes et al. that mitotic stability in yeast is reduced is relevant in considering motivation to combine the cited documents.

Further Reply to Examiner's Response to Arguments for Issue B

The Examiner argues that the conclusions made by the Appellant's on pages 13 to 14 appear to be contradictory. This is not true. As discussed in the Appellant's Brief on Appeal at page 13, first full paragraph, Hallborn et al. teach two different types of vectors. The arguments in the Appellant's Brief on Appeal at page 13, second full paragraph, are directed to the combination of the vectors of Ho et al. with one type of vector taught by Hallborn et al., and the arguments in the next paragraph of the Appellant's Brief on Appeal are directed to the combination of the vectors of Ho et al. with the second type of vector taught by Hallborn et al.

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Appellants note that the Examiner refers to Figure 2 of Ho et al. to show that a gene is disclosed as having flanking sequences. Appellants are unsure why this is discussed in the Examiner's Answer. The flanking sequences in Figure 2 are the sequences that naturally flank the gene in the yeast chromosome (see Ho et al. at page 9, lines 5-10, and page 14, lines 11-15).

CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper is being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to MAIL STOP APPEAL BRIEF - PATENTS Commissioner for Patents, Attn: Examiner Robinson, P.O. Box 1450, Alexandria, VA 22313-1450, on this 30th day of September, 2005, at 1:30PM (Central Time).

Jaquelyn K. Torborg
JACQUELYN K. TORBORG

Date

September 30, 2005

Respectfully submitted for
PURDUE RESEARCH FOUNDATION

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